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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,597

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Georges Cholet

CHOLET2

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EXAMINER

LE BOULLUEC, MICHAEL E

ART UNIT

PAPER NUMBER

4146

MAIL DATE

DELIVERY MODE

02/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,597	Applicant(s) CHOLET ET AL.	
	Examiner MICHAEL LE BOULLUEC	Art Unit 4146	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>17 June 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claim 2 is objected to because of the following informalities:

- in claim 2, line 11 "a cavity" should be - the cavity -;

Appropriate correction is required.

Claim 5 is objected to because of the following informalities:

- in claim 5, line 8 "the cigarette" should be - a cigarette -;
- in claim 5, line 10 "a hyperfrequency cavity" should be - the hyperfrequency cavity -;
- in claim 5, line 19 "the upper end" should be - an upper end -;
- in claim 5, line 20 "the filter" should be - a filter -;
- in claim 5, line 21 "the lower end" should be - a lower end -.
- in claim 5, line 23 "the second sphincter" should be - a second sphincter -.
- in claim 5, line 25 "the flow of aspirated air" should be - a flow of aspirated air -;
- in claim 5, line 28 "the space" should be - a space -;
- in claim 5, line 28 "the first and second part" should be - a first and second part -;

Art Unit: 4146

- in claim 5, line 30 "leading into a chamber" should be - leading into the chamber -;
- in claim 5, line 31 "the filter ventilation flow rate" should be - a filter ventilation flow rate -;

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Mays et al. (EP 0967479).

5. Regarding claim 1, Mays et al. discloses a sample-holder 10 (fig. 3, col. 4, line 5) for measuring parameters of porous objects (col. 3, lines 15-17), this sample-holder comprising a draw measurement cell 18 (fig. 4, col. 5, line 21), and a hyperfrequency cavity (bordered by 34/36, fig. 4, col. 4, line 24) for humidity measurement (col. 3, line 17) integrated within the cell so as to surround the object (col. 4, line 57 to col. 5, line 1) present in said cell over at least part of its height (col. 5, lines 7-8), to enable measurement (col. 3, lines 11-13) of humidity, before and/or after draw measurement.

Regarding claim 4, Mays et al. teach said sample-holder comprising a processor 60 (col. 5, lines 2-3) able to control an operative sequence (col. 5, lines 6-9) successively comprising measurements (col. 5, lines 4-6) of:

- humidity before draw,
- standardized draw TN,
- filter ventilation VF,
- paper ventilation VP,
- draw with filter ventilation closed TFE,
- humidity after draw.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mays et al. (EP 0967479) as applied to claim 1, and further in view of Fuchigami et al. (US Patent 6134948).

8. Regarding claim 2, Mays et al. disclose a sample-holder intended to measure parameters (col. 3, lines 15-17) of a cigarette (col. 3, line 18) comprising a tobacco rod (col. 3, line 19) wrapped in cigarette paper (col. 3, lines 20-21), said sample-holder

Art Unit: 4146

comprising a tubular body (col. 4, line 18), said sample-holder comprising a tubular body comprising:

- the cavity 34/36 (col. 4, lines 18-19) surrounding the tobacco rod over at least a fraction of its height (col. 3, line 25) so as to allow determination of the humidity content (col. 3, lines 15-17) of the tobacco through the analysis (col. 4, lines 53-55) of hyperfrequency signals (col. 4, lines 45-47).

However, Mays et al. do not specifically teach an access orifice provided with an iris diaphragm enabling separation of the top of the tobacco rod from the atmosphere; at least a first sphincter to perform draw measurements using aspiration means and second means for measuring pressure; or the distance between the iris diaphragm and the lower end of the sphincter being slightly shorter than the length of a cigarette.

Fuchigami et al. teach a tobacco rod T (fig. 5) wrapped in cigarette paper (col. 29, line 17-18) and a filter F (fig. 5), said sample-holder comprising a tubular body comprising:

- an access orifice 470 (fig. 11 & 13, col. 21, lines 24-28) provided with an iris diaphragm 471a (fig. 13) enabling separation of the top of the tobacco rod from the atmosphere (col. 21, lines 2-4) so as to channel the flow of paper ventilation (col. 22, lines 22-27) for its measurement using first suitable flow measuring means 484 (fig. 16, col. 23, line 11),
- at least a first sphincter 472c (fig. 15, col. 21, lines 20-21) to hold the cigarette in place by encapsulating the filter end (col. 21, lines 21-23),

Art Unit: 4146

so as to perform draw measurements (col. 24, lines 59-60) using aspiration means V_f (Fig. 16, col. 23, lines 1-4) associated with said sphincter and second means 493 (fig. 16, col. 22, line 33) for measuring pressure (col. 24, lines 59-60),

- the distance between the iris diaphragm and the lower end of the sphincter being slightly shorter than the length of a cigarette (fig 16).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the sample holder of Mays et al. with an access orifice and first sphincter to measure flow rate and pressure as taught by Fuchigami et al. to monitor and accurately measure paper ventilation for its measurement and draw measurements. With the improvement in the apparatus taught by Fuchigami et al., Mays et al. would be capable of performing measurements for separate parts of the completed product (tobacco rod, paper, and filter), avoiding defects introduced into the cigarette when cutting the tobacco rod into individual cigarettes, and damage to the paper when attaching the filter onto the tobacco rod.

Regarding claim 3, Mays et al. disclose the claimed invention as cited above, however does not specifically teach a second sphincter enabling encapsulation of the filter opposite the first sphincter with respect to a ventilation zone of the filter so as to channel the ventilation flow of the filter for its measurement.

Fuchigami et al. teach a sample holder 401 (fig. 16, col. 21, line 52) comprising a second sphincter 470 (fig. 11 & 13, col. 19, lines 31-33) enabling encapsulation of the filter opposite the first sphincter (fig. 11 & 16) with respect to a ventilation zone of the

Art Unit: 4146

filter 401b (fig. 16) so as to channel the ventilation flow (col. 21, lines 55-56) of the filter for its measurement (fig. 16, col. 23, lines 15-29).

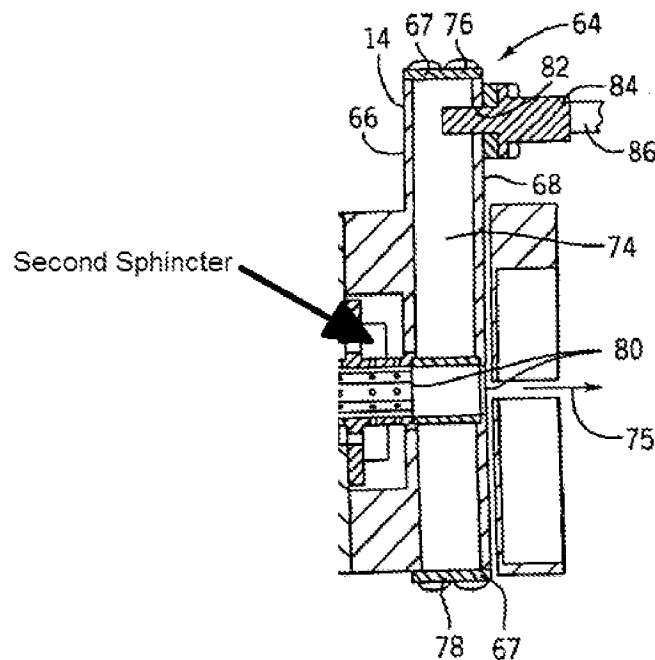
Therefore it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the sample holder of Mays et al. to incorporate a second sphincter enclosing the area around the filter to measure pressure and ventilation flow of the filter as taught by Fuchigami et al. With the improvement in the means taught by Fuchigami et al., Mays et al. would have the capability to isolate testing of the separate entities of the finished product (tobacco rod and filter), make multiple measurements of the filter in order to select the best materials for the desired flow characteristics of the filter, and isolate deficiencies (damage to the cigarette paper, fill rates of the tobacco rod) in the cigarette through air flow and pressure analysis before release of the product for sale and customer knowledge of defective products.

Regarding claim 5, Mays et al. disclose a sample-holder comprising, firstly, a cylindrical structure (col. 4, lines 17-18) made of three tubular parts assembled onto one another (fig. 3 & 4), namely:

- a first part (smaller cylindrical casing bolted onto 14, fig. 3 & 4) comprising a hopper whose central coaxial cavity comprises a part of flattened cone shape 118 (fig. 7) followed by a cylindrical part whose diameter is substantially that of a cigarette (fig. 4), the lower part of this hopper comprising an iris diaphragm (entrance into 16, fig. 3 & 4),
- a second part 16/20 (fig. 4) consisting of the hyperfrequency cavity, this part comprising a cylindrical casing (col. 4, line 18) whose two

circular walls 30/32 (fig. 2, col. 4, line 23) comprise two coaxial circular orifices 34/36 (fig. 2, col. 4, lines 24) into which the two respective ends of a tube in dielectric material fit with gas-tight assembly, the inner diameter of this tube being slightly larger than the cigarette diameter (fig. 4),

- a third part 14 (fig. 4) comprising a cylindrical central passage with several bore levels (fig. 4) carrying a first sphincter (indicated by 80, fig 4) intended to encapsulate the cigarette at an upper end of the filter, and a second sphincter (opposite 80, fig. 4) intended to encapsulate a lower end of the filter.



Mays et al. disclose the claimed invention as cited above, however does not specifically teach aspiration means connected downstream of the second sphincter, a

Art Unit: 4146

first air flow duct to channel and measure the paper ventilation flow rate, or a second air flow duct to channel and measure the filter ventilation flow rate.

Fuchigami et al. teach the means for the air flow and pressure measurements as,

- aspiration means 451b (col. 19, lines 19-21) connected downstream of a second sphincter 470 (col. 17, lines 14-17), these aspiration means comprising means for measuring a flow of aspirated air (col. 23, lines 45-48),
- a first air flow duct 432d (fig. 11, col. 24, lines 22-23) leading into a chamber 401b (fig. 16) located in a space between a first and second part, to channel and measure a paper ventilation flow rate V_p (col. 23, lines 53-58),
- a second air flow duct 441b (fig. 11, col. 16, lines 46-49) leading into the chamber located in the space between the two sphincters (area bounded around 401b, fig 16), to channel (col. 23, lines 15-26) and measure a filter ventilation flow rate (col. 23, lines 27-29).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the sample holder of Mays et al. to incorporate the chambers for isolating the filter from the tobacco rod of the cigarette as taught by Fuchigami et al. to measure parameters of flow rates and pressure through a completed cigarette. With the additional apparatus taught by Fuchigami et al., Mays et al. would be capable to isolate issues with production of the completed product (tobacco rod and filter), and isolate deficiencies (damage to the cigarette paper, fill rates of the tobacco

Art Unit: 4146

rod) in the cigarette through air flow and pressure analyses before release of the product for sale and customer knowledge of defective products.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LE BOULLUEC whose telephone number is (571)270-3892. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef, can be reached on 571-290-5026. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mle 1 February 2008

/MARVIN LATEEF/

Supervisory Patent Examiner, Art Unit 4146

